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Assessing the Impact of the Mobile Assisted Career Exploration Unit 3 Years Later

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ASSESSING THE IMPACT OF THE MOBILE ASSISTED CAREER EXPLORATION UNIT 3 YEARS LATER

by

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Gary Lynn De Vries

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ABSTRACT

Assessing the Impact of the Mobile Assisted Career Exploration Unit 3 Years Later

by

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Utah State University, 1975

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The specific objective of this research was to determine if the MACE (Mobile Assisted Career Exploration) Program has had an effect on the realistic occupational decision-making ability of students after a period of 3 years.

Subjects were 12th grade students at Dixie High School. The experimental group was composed of 40 students (15 males and 25 females) who had been involved in project MACE in the ninth grade. The control group was composed of 32 students (15 males and 17 females) who had moved into the boundaries of Dixie High School since the 10th grade and who had, therefore, not been involved in the MACE Program.

Both groups were administered the SVIB (Strong Vocational Interest Blanks) to determine their highest interests. Grades for both semesters of the 11th grade and the first semester of the 12th grade were collected as an indicator of each student's strongest aptitudes. A questionnaire was administered wherein the student was required to 1) select an occupation that he was planning to enter; 2) report whether he thought his interest and aptitudes agreed

with his job choice (the SVIB and grades were used as instruments to verify if a student's interests and aptitudes did in fact agree with his job choice); 3) report the degree of certainty he felt about his job choice; 4) select the type of training that would be required to qualify for his job choice; 5) report a specific institution where such training could be acquired; 6) report those persons and/or influencing factors which had lead up to his job selection; and 7) report at which grade level he had decided on his present job choice.

Seven null hypotheses were formulated stating differences would not be found between the control and experimental groups on the criteria measured by the aforementioned measuring instruments.

Results of the study indicate that in fact no difference was found between the experimental and control groups in the following areas tested.

1) Correct identification of personal interests with job choice.
2) Correct identification of personal aptitudes with job choice.
3) Degree of certainty about job choice.
4) Selection of the categories mobile van, parents and personal interests as being of assistance in making a job choice.
5) Selection of the ninth and 10th grades as the time periods when job choice was made.
6) Selection of an appropriate type of education or training for the student's job choice.

7) Selection of a specific and appropriate institution at which the student had made plans to obtain the training or education for his job choice.

On the criteria measured, the MACE Program had no apparent longitudinal effect on the occupational decision-making ability (as defined in this study) of the students tested. Several limitations of the study should be considered in this conclusion: 1) sample size was small and limited to a rural, all-white population; 2) other measures may detect advantageous effects of the program. However, it is recommended that a program such as MACE be part of a total K-12 career development program rather than a one grade level experience.

(72 pages)

CHAPTER I

Introduction

Vocational guidance is fast being recognized as not only important but essential in our present educational systems. Donald Super (1957, p. 136) points out that "for some fifteen years vocational guidance has been overshadowed by personal guidance, by guidance focusing on personality problems and personal judgements."

Not only have school counselors placed their emphasis away from counseling, many counselors have been so preoccupied with administrative work that their effectiveness in counseling has been greatly limited. Odell (1915, p. 51) explains the situation as follows:

> The vocational guidance program has been eclipsed by the preoccupation of counselor trainers and counselors who aspire to be clinical psychologists, lay analysts, and social case workers. Vocational guidance has been down graded in recent years. Many school administrators think of counselors more as clerks or as administrators than as counselors. Most counselors have too large a case load. But even when they are not overloaded with administrative details that could be better carried on by clerks . . . what little counseling is done is seldom concerned with vocational choices.

Utah counseling patterns reportedly follow a similar trend as that described by Odell. In a study by Adams (1968) designed to determine what degree Utah high school students were being oriented to vocational and technical goals, he found the following results:

1. 27.3 percent of the students will not visit the counselor,
2. 31.6 percent only visited him once or twice during high school,

3. less than half had tests interpreted for them,
4. largest percent stated counselors had little or no influence on their post high school education, and
5. over 60 percent said the counselor did not help them identify their interests and abilities.

Thus it seems evident that counselor emphasis has been away from career guidance. A good deal of research, however, seems to indicate that students are in need of and desire career counseling. Adams pointed out further in his study that:

1. the majority of the students expressed a need for help in choosing a career, and
2. 87.5 percent said this was the counselor's role.

Froelich (1948) found that the problems brought to a free community counseling center consisted of above 29 percent educational problems, 60 percent occupational problems, and about 11 percent personal problems.

In research done by Remmers and Shimberg (1949), they reported that 40 to 50 percent of their group of 15,000 teenagers checked items which revealed a concern of ninth graders for how they should earn a living after high school.

In studies done by Laycock (1942), similar concern of youth for its educational and occupational future was shown.

A number of vocational and educational experts have also identified the importance of vocational guidance. For example, Blocker and Miller (1961, p. 115) propose the following viewpoint of vocational guidance:

> Vocational guidance is a broad social function concerned with applying scientific knowledge and human understanding toward the development of social processes and individual learning experiences. Its purpose is to promote the maximum realization of human potential for social contribution and self-fulfillment through work. Vocational guidance seeks to contribute to the organization of a society which provides opportunities for all its members to meet material and psychological needs in socially constructive ways. Vocational guidance is intended to help individuals relate themselves to work within the framework of a life style that is personally satisfying, socially constructive, and economically productive.

Dr. Sidney P. Marland, Jr. (Goodman, 1970, pp. 25-28), U.S. Commissioner of Education, has spoken out vigorously for career education:

> So what I would hope for is a new orientation of education--starting with the earliest grades and continuing through high school--that would expose the student to the range of career opportunities, help him narrow down the choices in terms of his own aptitudes and interests, and provide him with education and training appropriate to his ambition. In many cases, his training would certainly involve the "manipulative" skills commonly associated with vocational education. It would be strongly and relevantly undergirded by education in the traditional academic subjects.

Commissioner Marland went on to say:

> In any event, what the term "career education" means to me is basically a point of view, a concept--a concept that says three things: First, that career education will be part of the curriculum for all students, not just some. Second, that it will continue throughout a youngster's stay in school, from the first grade through senior high and beyond if he so elects. And third, that every student leaving school will possess the skills necessary to give him a start in making a livelihood for himself and his family, even if he leaves before completing high school.

Commissioner Marland proposed a K-12 program for all schools. But what about schools without sufficient funds for the immediate implementation of such programs? Will a program in one or several grades be effective? For example, will a program of career guidance conducted in the ninth grade

increase the capacity of the students when they become 12th graders to make wiser choices in their career explorations?

A number of career programs have been formulated. One such program in Utah is called the MACE (Mobile Assisted Career Exploration) Program. (For an outline of this program see Charlton, 1973.) This program was conducted initially in Southern Utah in schools which are presently not financially able to implement a K-12 career guidance program. Some of the objectives of the MACE Program were that each student would: 1) Know and understand his developmental status, i.e., personal interests, values, abilities, etc.; 2) Know and understand the conditions and requirements of the many possible life alternatives in which he might participate; and 3) Be able to plan to make decisions wisely.

The realization of these objectives is important throughout the educational development of all students, but it is very critical when students are ready to leave high school. At this stage of life, students are forced to make crucial decisions about preparation for or entry into the world of work.

Statement of the Problem

This study will attempt to answer the question, "Is project MACE effective in helping 12th grade students (who had the program in the ninth grade) make career choices that are appropriate to their tested ability and interest patterns?"

Purpose

The purpose of this study is 1) To determine if project MACE given to ninth graders will aid these same students now as 12th graders in making career choices that are congruent with their interest and ability patterns as measured by the Strong Vocational Interest Blank and grades and, 2) To determine if students who have gone through the MACE program will be able to answer a questionnaire in such a way as to indicate more maturity in career planning than do control group students.

Objectives

The specific objective of this study is to determine if the MACE Program has had an effect on the realistic occupational decision-making ability of students after a period of 3 years. This study will test the following hypotheses:

1) There will be no difference between the experimental group and the control group on the number of correct identifications of interest with job choice.

2) There will be no difference between the experimental group and the control group on the number of correct identifications of aptitudes with job choice.

3) There will be no difference between the experimental group and the control group on their degree of certainty about their job choices.

4) There will be no difference between the experimental group and the control group on selecting the categories, mobile van, counselor and personal interest as influencing factors in the job choice process.

5) There will be no difference between the experimental group and the control group on making decisions about job choices at earlier ages (ninth and 10th grades).

6) There will be no difference between the experimental group and the control group on the number of correct associations of job choice with appropriate post high school training.

7) There will be no difference between the experimental group and the control group on the number of correct associations of job choice with specific institutions at which adequate training can be acquired.

Definitions

Appropriate choice. A career choice which will promote the maximum realization of human potential for social contribution and self-fulfillment through work.

Career. The occupation chosen by a person for the purpose of gaining financial subsistance and developing and implementing his self-concept.

Career guidance. "The process of helping a person to develop and accept an integrated and adequate picture of himself and his role in the world of work, to test this concept against reality and to convert it into reality, with satisfaction to himself and benefit to society" (Super, 1953, p. 185).

Occupational stereotype. How one perceives jobs or a job through his present knowledge.

Mature planning. A three phased process in which an individual develops as complete an understanding of himself as possible, as complete an understanding of the world of work as possible, and then integrates these so that effective career decisions can be made.

Project MACE. "MACE" is an acronym for Mobile Assisted Career Exploration. This project was developed by the psychology department at Utah State University in conjunction with the Research Office of the Board of Education for presenting a career guidance program to ninth grade students in rural high schools in Southern Utah.

Vocation. 1) A word often used interchangeably with the word career. 2) A word used to denote those occupations which do not require as a prerequisite a formal college education. 3) A word used to denote those occupations which require as a prerequisite vocational or trade school training.

Vocational self-concept. One's perception of his personal characteristics (i.e., interests, aptitudes, values, abilities) as they relate to his feeling adequate to function in a given occupation or occupations.

World of work. The vast array of occupational possibilities available for human occupancy.

CHAPTER II

Review of Literature

The Importance of Career Guidance

In recent years, a great deal of stress has been placed on career counseling and career education. This emphasis is a result of a changing society re-emphasizing the importance of the individual. The average working person spends a great deal of his lifetime on the job. Bryn (1969) reported that the average man can expect to work 25 years outside of the home. With so much of a person's lifetime spent "on the job," it is not surprising that more and more emphasis is being placed on job selection and job satisfaction.

A person's occupation is much more than merely a means of sustaining life. Super (1953) suggested that a person can gain a great deal of satisfaction in his occupational choice if he can develop and implement his self-concept through that occupation. Isaacson (1971) stated that work is one of the functions through which a person related to society. Work supplies a person and his family with such social necessities as status, recognition, and affilitation so that they can feel a part of and function successfully in their social setting. Quey (1968) suggested that more attention is being given work as means through which the individual can express himself.

If people are going to find the type of satisfaction in their occupation that is suggested by Super, Isaacson and Quey, then effective preparation for job selection is essential. An ideal place for this preparation to occur is in

our school programs. Many authorities in psychology and education are suggesting that schools are not preparing students to choose or function in occupations. They maintain that much of the present unrest and dissention among youth is due to the irrelevance of what is being stressed in schools.

William Glasser (1969, p. 189) made the following observation:

> Recently, a poll was taken at San Fernando Valley state. . . . The main dissatisfaction the students had with the curriculum was that it was not relevant to their lives. Almost 60 percent of the students said that they could see no relationship between what they were doing in school and what they expected to be doing later on. They were bitter and complaining about this lack of relevance. If the anger on our college campuses seems out of proportion to what seem to be the problems on the campuses themselves, I suggest that the anger stems not merely from the irrelevance of the students college education but also from their sudden realization that all of their educational experiences from the first grade on have been irrelevant.

Glasser concluded by stating that, "If we attempt to teach them too many subjects unrelated to their lives, they will invariably lose interest and begin to fail."

Rudolf Driekurs (1968, p. 14) agreed with the ideas of Glasser and stated further that society pressures adolescents to excel and gain some degree of importance but then offers very few avenues through which these ends may be obtained. Driekurs suggested that "Unless society finds avenues in which the adolescent generations can take on responsibilities as equal partners in school and in the community, the ambitions instilled in these youths will tend to express themselves, logically and naturally in useless or undesireable ways."

William Dugan (1966) writing about the high rate of unemployment for young people between ages of 16 and 21, implied that career guidance and career education in the school system are excellent means of supplying "relevance" to education. He stated, "The urgent need simply is for school educators and counselors to become fully mindful of the magnitude of waste of human talent and to support more meaningful education and vocational guidance appropriate to the needs of the individual.

The Utah Board of Education (1972, p. 23) has also stated that a good career guidance program is instrumental in giving relevance to the educational process. They concluded:

> In short, career guidance provides motivation by bringing relevance into education and by providing students with methods by which they may identify goals. . . . Students often find that there is no relationship between the course they are taking in school and the "real world." They are increasingly voicing discontent. This discontent is manifested in student uprisings and other forms of unrest. Helping them make realistic educational and career plans will give meaning to the school program they pursue.

In summary, it is claimed that career guidance gives relevance to education, increases a person's dignity and self-concept, and helps him make more appropriate vocational decisions.

The Age of Applicability for Career Guidance and Education

Super (1953) and Ginzberg (1951) suggested that occupational choice is a developmental process which may take place over a long period of time. U.S. Commissioner of Education, Sidney Marland (1972), stated that career guidance should be conducted in grades K-12 for all students.

Astin (1967), Tyler (1964) and Tiedeman (1952) agreed that career guidance should be conducted over a long period of time but concluded that the ninth and 12th grades are critical times in occupational development. The ninth grade is when the student must decide on what high school curriculum to follow and the 12th grade is when the student is faced with the alternatives of employment, military service or further education.

Lastly, Gibbons (1964), in evaluating factors dealing with readiness for vocational planning, indicated that some students are prepared for realistic vocational planning in the eighth grade while others are still not ready in the 10th grade. Gibbons concluded by stating that vocational guidance is necessary to assist those who are ready at earlier ages to begin vocational planning and preparation, while those who are not ready must receive assistance in becoming more aware and thus ready for realistic vocational planning and preparation.

Major Goals of Career Counseling

As one scans a catalogue of materials for career guidance, he quickly becomes aware of the wide range of materials and approaches available. Although greatly diversified, most of these approaches and materials are based on accomplishing three major goals: First, to help the student become aware of himself (i.e., his interests, aptitudes, achievements, abilities and values) and to develop a realistic "vocational self-concept." Goal number 2 is to help the student become aware of and knowledgeable about the different occupations in the "world of work." The third goal is to help the student integrate the

knowledge he has of himself and the "world of work" in order to make an accurate and realistic occupation choice.

A number of authorities concur with these goals and objectives of career education. Parsons, in 1909, suggested that the guidance process was one of analyzing the person, analyzing the job, and matching the two. Super (1953) stated that "Job choice is matching how one perceives himself with his 'occupational sterotypes' (How he perceives jobs or a job through his present knowledge). Guidance can make the choice more realistic by helping the person gain a realistic 'vocational self concept,' and a realistic 'occupational stereotype.'"

Dugan (1966, p. 14) suggested that:

> Effective vocational guidance must take account of the values and goals of the individual, his right and his responsibility for self exploration. This is best accomplished by helping the individual to understand more accurately both himself and the world of work . . . this means early identification of needs, specific strengths, disabilities which need correction, attentiveness to interests, concern for underachievement and those environmental factors which may deter or enhance his progress.

O'Hara (1968, p. 640) stated further that:

> If we do not provide the student with some kind of occupational and career information, the full range of possible responses will not be open to him. He will be a vocationally deprived child. Guidance counselors must intervene in the habitual perception of the vocational work in order to broaden that perception, to open up the number of options available, and to make each option clearly distinct, and patterned in accordance with the unique interests, abilities and values of the student.

Many other writers (e.g., Super, 1953; Braland, 1970; Ginzberg, 1951; Tiedeman, 1952) agree that students need to gain a clear understanding

of their abilities, interests, achievements, personality patterns and values and to compare these to the occupations in the "world of work" in order to select an appropriate occupation.

A number of career guidance programs (e.g., MACE [See Charlton, 1973]; Ryan, 1964; DeVault, 1963; Braland, 1970; Utah State Board of Education, 1972; Gonyea, 1962) have been based on the three major goals reported previously in this review as being necessary in career counseling.

Evaluations Conducted of the MACE and other Career Guidance Programs

Because most career guidance programs are involved in helping people become aware of thier interests, aptitudes and other personality traits as they relate to the "world of work," it is not surprising that most evaluations of these programs also involve assessment of these traits and their relationship to an individual's chosen occupation.

Gonyea (1962) in evaluating a career counseling program, conducted a pre-counseling evaluation of job choice as compared to interests and ability scores and post-counseling comparison of the same criteria. Another comparison was conducted 1 year later. Results indicated that between pre and post counseling there was a significant change in the direction of greater appropriateness of choice (.001 significance level) which was attributed to the counseling experience. In an evaluation 1 year after counseling, it was found that the changes in appropriateness of vocational choice found in the "immediately after comparison" had endured.

Astin (1967, p. 98), in a study conducted to predict 12th grade occupational choices from criteria in the ninth grade (i.e., achievement scores, aptitude scores, school subjects taken), concluded that the most potent ninth-grade predictors of 12th grade career choice were interest measures and initial career choice. The results show that, ". . . students, by the time they enter ninth grade, have interests and personal orientations, that are predictive of the career choices they make when they are about to terminate their high school education."

DeVault (1963) conducted an evaluation of the influence of a vocational planning unit on the vocational choices of a group high school juniors. A comparison was made between tested interests and abilities and job choice to determine the appropriateness of the job choice. The experimental group was found to have improved significantly in appropriateness of vocational choice.

Ryan (1964) conducted similar research as that of DeVault's, but found no change in appropriateness of vocational choice after counseling. He concluded that it is questionable whether the self-concept is amenable to change in a 9-week period the time required for the career counseling program.

Gonyea (1963) tested college seniors who as freshmen had received vocational counseling. He concluded that college students who seek and receive individual vocational counseling at some point during their college careers choose no more appropriate vocational objectives as seniors than

they did before counseling. Moreover, these objectives are no more appropriate than those stated by seniors who have not been counseled.

Charlton (1973) evaluated the effectiveness of the MACE Career Guidance Program which was conducted with ninth graders in rural junior and senior high schools in Southern Utah. The purpose of this program was to help students acquire experience in two basic areas: (1) in gaining knowledge of one's self (i.e., interests, aptitudes) and the world of work; and (2) in practicing to utilize this knowledge in pre-vocational decision-making. Charlton's (1973, pp. 40-43) conclusions after this evaluation were:

1. The data indicate that the study apparently did facilitate career attitude development in the ninth grade students involved in the project.
2. The data in this study indicate that the treatment did facilitate student awareness of his aptitudes and interests.
3. The treatment apparently influenced students to choose interest and satisfaction as career values.
4. The treatment influenced many students to reject prestige as a career value. The writer feels that in terms of career counseling this finding may have a positive meaning. There are other values in career choice which have much more relevance to job success than prestige does.
5. The treatment had no apparent effect on the career values of salary, security and demand.
6. The data reflected that experimental females made greater gains in understanding aptitudes and interests than did experimental males.
7. Apparently all groups could more accurately estimate their interests than they could their aptitudes. One might conclude that interests are better understood and related to oneself than are aptitudes.

Vicki Clark (1971) in evaluating the effectiveness of the MACE career guidance program using the General Aptitude Test Battery to measure abilities, concluded that Project MACE did not affect the ability of ninth grade students to

choose occupations that are appropriate to their tested aptitude patterns. (The seeming discrepancy between Charlton's and Clark's conclusions on the effectiveness of the MACE Program in helping students to become aware of their aptitudes is perhaps because different measurements were used. Charlton measured the ability of a student to accurately rank order his abilities, while Clark measured the students' ability to choose an occupation congruent with his measured abilities.)

Thus, it can be concluded that different programs (and even the same programs if different methods of measurement are used) produce different results. These differences may be due to a number of factors. Graff (1972), in research with three different types of career guidance, concluded that the type and quality of a program is definitely an influencing variable when considering the effectiveness of career guidance programs. Davis (1970) concluded that the effectiveness of his career guidance program was related to the amount of student exposure to the program. It thus seems reasonable to conclude that the type of, quality of and length of exposure of a career guidance program will have a definite influence on its effectiveness. Other factors which may influence the success of a program are the personnel conducting the programs, and the age and personality characteristics of the counselees involved in the program.

Summary

This review of literature has included a discussion of the importance and significance of career guidance in our present educational system.

It has been determined that the goals of career guidance and career education are: first, to help students gain a realistic "vocational self-concept;" second, to help them gain realistic "occupational stereotypes;" and third, to help them integrate their personal vocational self-concept and occupational stereotypes in making an appropriate job selection.

It has been concluded that some career guidance programs are effective in accomplishing the goals mentioned above and some are ineffective. Research conducted to measure career guidance effectiveness over time also indicates that some programs have an enduring positive effect while other programs do not.

Conclusions

The value of any career guidance program is in how well it prepares a person to make an occupational choice which is congruent with his vocational self-concept. A program conducted in junior or senior high school which has only temporary effects will have little value to the counselees when they are confronted later on in life with job selection.

The MACE Program and other programs quoted in this review of literature have been shown to be effective when evaluated immediately after their presentation. The real value of these programs can only be determined when their effects are evaluated just prior to the time when the program participants are forced into making critical decisioms about occupational selection. The students who were involved in the MACE Program are now graduating from high school and are being forced to make critical vocational decisions. The

research of this thesis is being conducted to determine if the effects of the MACE Program have endured to assist students in making these critical decisions.

CHAPTER III

Methodology

Sample

Both the experimental group and the control group were selected from senior students at Dixie High School in St. George, Utah. Dixie High School was selected because: (1) The data collected originally on MACE indicated Dixie High School to be representative of the total high school population which participated in the MACE Program; (2) Monies were available for only a limited sample to be chosen, (3) Dixie High School had a senior population large enough to provide an adequate control group sample. The original experimental group consisted of 25 males and 25 females chosen randomly from senior students who had participated in the MACE Program as ninth graders. The control group was composed of 17 females and 15 males who had entered Dixie High School after the ninth grade. The control group had not been involved in the MACE Program. It was hoped that by selecting the control group from the same population as the experimental group that many variables could be controlled that would otherwise contaminate the study. Thus, any circumstances that existed in high school which would have enhanced student occupational choice making ability should have influenced both control and experimental groups equally.

Of the 25 experimental males selected, nine refused to cooperate at all in the study and three made mistakes on different parts of the tests and the

questionnaire. This resulted in the number of experimental males fluctuating slightly in different phases of the study.

Instruments

Strong Vocational Interest Blanks. The Strong Vocational Interest Blanks (SVIB) test was chosen because: (1) it is appropriate for the age of the students in this study; (2) it contains both basic interest scales and occupation scales which makes it convenient to determine a person's interests in a wide variety of different occupations; (3) the test research reports establish that it is among the most valuable measurements for assessing vocational interest.

The SVIB was used in the research of this thesis to determine if students chose jobs which were related to their interests. A person scoring B+ or A for a given occupation on the occupational scales was considered to have interests congruent with that occupation. Scores of B, B-, or C were not considered to be indicative of interest in an occupation. The interpretation manual for the SVIB states that A & B+ are considered to be high scores while C is a low score. Scores of B or B- may indicate some interest but are not as concrete as A or B+ scores. The manual also states that when considering scores on the Basic Interest Scales, 58 or above is considered to be high. Therefore, in this study a Basic Interest Scale Score of 58 or more was considered to be indicative of interest in jobs belonging to the interest scale being considered.

High school grades and grade point averages. Grades were used as a measure of both aptitude and achievement because: (1) grades were readily available at no expense; (2) research conducted on grades as predictors of success on the job, success in vocational training programs and success in college, indicates that grades are as good as or better than other types of aptitude measures for predicting success in these areas. (See Super, 1942; Hewer, 1957; Franz, Davis, and Garcia, 1958; Aiken, 1964; Herbert, 1967; Passons, 1967; Stricker and Huber, 1967; Wageman, 1967; Brenner, 1968; Coppedge, 1969; and Siegelman, 1971.)

The grades in classes considered to be "essential" and "important" for the job chosen by each student were considered in the research. Classes were selected through use of the book School Subjects and Jobs (Brochard, 1971). If a student had at least a 3.0 grade point average (using 4.0 for an A average, 3 for B, etc.) in the classes considered necessary for his job choice, he was considered to be achieving at a level indicative of having aptitudes necessary for success in that job.

Questionnaire. A questionnaire was developed by the writer to collect data necessary for analysis of the hypotheses stated in Chapter II. A test-retest reliability check was conducted using 29 high school seniors, 12 of which were from Bonneville High School in Ogden and 17 of which were from Logan High School in Logan. Eight days elapsed between the two administrations of the questionnaire. A copy of the questionnaire and results of the reliability check for each question (Table 10) can be found in Appendix A.

Procedure

The Strong Vocational Interest Blank and the questionnaire found in Appendix A were administered to both control and experimental groups in one session by the writer and the school counselor at Dixie High School. The testing took place spring quarter of the 1972-73 school year. Forty students (25 females and 15 males) formed the experimental group and were selected randomly from all of the senior students who were involved in the MACE Program as ninth graders. Those seniors who had moved to the high school since the ninth grade and who had not participated in the MACE Program were selected for the control group. The control group consisted of 32 persons, 15 males and 17 females.

Grades which were used as indicators of a student's achievement potential and his aptitudes were collected directly from individual student files which are kept on record at the school. The three most recent semester grades on file (two semesters in the 11th grade and one semester in the 12th grade), were accepted as being representative of the student's academic performance and were, therefore, selected for use in this study.

Treatment of data. The A and B+ scores on the SVIB were compared with the first job choice. (If it was impossible to compare the first job choice with occupations represented on the SVIB then the second job choice was used for comparison.) Three points were given if a positive correlation was found between a job and a score of A or B+ on the SVIB Occupational Scales or a standard score of 58 or above on the Basic Interest Scales. (To assist in

placing jobs in the correct scale on the Basic Interest Scale, the interpretation manual for the General Aptitude Test Battery was used.) Two points were given to any job choice that could not be accurately classified. One point was assigned to all job choices having a negative correlation with scores found on the SVIB. By assigning correct scores 3, incorrect 1 and uninterpretable scores 2 (A thus neutral rating), overall computation of scores resulting in a total mean of over 2 points indicate a positive correlation and a mean of under 2 points indicate a negative correlation.

Each questionnaire question was considered separately. The "Chi Square Test of Independence" and the Fisher Test were used throughout the study as means of statistical analyses of the data obtained.

Limitations

The limitations of this study were:

1. The sample size of both the experimental and control groups hinders generalization from the results of this study in several ways. First, subgroup analysis (i.e., males and females) was difficult because of the small number of persons in each subgroup. Second, the sample came from only one of the 14 school populations that were involved in Project MACE. However, the Dixie High School population was considered to be a representative population.
2. The experimental group was a sample selected randomly from a larger population, while the entire population of persons meeting the control group criteria were used.

3. The MACE Program dealt only with rural populations and, therefore, the results of this study cannot easily be generalized to urban populations.
4. The research reported in this thesis did not assess the impact of the MACE Program on students who may have already dropped out of school.
5. Perhaps the MACE Program had a long term impact on students in a way or ways not measured by the evaluative techniques of this particular study.
6. Some parts of this study were based on recall data (i.e., parts III and IV of the questionnaire). Recall data is always subject to suspicion because of the memory factor. It should be noted, however, that the use of a control group was one means of controlling for this type of contamination.

CHAPTER IV

Results

The results of this study will be reported in terms of an evaluation of each of the specific hypotheses reported in Chapter I.

Hypothesis 1

There is no difference between the experimental group and the control group on the number of correct identifications of interest with job choice.

The results of the research indicate that the null hypothesis may not be rejected. Table 1 shows that the percentage of correct scores for control and experimental males was almost identical. The experimental females scored higher than the control females but not higher than either of the male groups.

A statistical analysis was run on the experimental and control group females and males and the total experimental group and the total control group.

Computed Chi Squares for experimental and control males, experimental and control females, and experimental and control total groups do not approach 2.71, the value necessary for significance.

Hypothesis 2

There is no difference between the experimental group and the control group on the number of correct identifications of aptitudes with job choice.

Scanning Table 2 will show that no significant difference exists between any of the control and experimental subgroup categories nor the total control

Table 1

Perceptual Accuracy of Student's Interests

	Frequency	Correct (%)	Incorrect (%)	Computed X^2
Experimental Group Males	13	9 (69.2%)	4 (30.8%)	.067 N.S.*
Control Group Males	13	10 (66.7%)	5 (33.3%)	
Experimental Group Females	25	17 (68.0%)	8 (32.0%)	.187 N.S.*
Control Group Females	16	9 (55.6%)	7. (44.4%)	
Experimental Group Total	38	26 (68.4%)	12 (31.6%)	.134 N.S.*
Control Group Total	31	19 (61.3%)	12 (38.7%)	

*Critical Value for Significance is $X^2 \geq 2.71$

Table 2

Perceptual Accuracy of Student's Aptitudes

	Frequency	Correct (%)	Incorrect (%)	Computed X^2
Experimental Group Males	14	8 (55.6%)	6 (44.4%)	.049 N.S. *
Control Group Males	15	9 (60.0%)	6 (40.0%)	
Experimental Group Females	25	16 (64.0%)	9 (36.0%)	.08 N.S. *
Control Group Females	17	11 (64.7%)	6 (35.3%)	
Experimental Group Total	39	24 (61.5%)	15 (38.5%)	.026 N.S. *
Control Group Total	32	20 (62.5%)	12 (37.5%)	

*Critical Value for Significance is $X^2 \geq 2.71$

and experimental groups. Hypothesis number 2 must, therefore, be accepted indicating no significant difference between control and experimental groups in the correct identifications of aptitudes with job choice.

Hypothesis 3

There is no difference between the experimental group and the control group on their degree of certainty about their job choices.

Tables 3, 4, and 5 and Figures 1, 2, and 3 report the data collected for analysis of Hypothesis number 3. It should be noted that when using the Chi Square Test of Independence of Categorical Variables, the expected frequence should be equal to or greater than five in at least 80% of the cells (Siegel, 1956). It will be noted, therefore, that the data presented in Tables 3 and 4 does not lend itself to analysis with the Chi Square Test. The appropriate statistic to be used with this data is the Fisher Test.

Through the use of already computed tables for the Fisher Test (Siegel, 1956) it was found that no significant difference exists between the experimental and control group male scores reported in Table 3. The significance information for the data reported in Table 4 was not available on the computed tables due to the larger number of individual scores being reported. Computation of significance using the Fisher Test was not possible because the writer was unable to obtain a calculator capable of dealing with the extremely large numbers encountered in such calculations. However, it will be noted that a Chi Square Test was run on the data for the total groups which is reported in Table 5. No significant difference was found in total group scores. Since no difference was found between control and experimental males and the control and experimental total groups a simple visual examination of the data in Table 4 is sufficient to detect that no significant difference exists between the control and experimental female groups. Therefore, Hypothesis number 3 cannot be rejected and it must be concluded that there was no difference on the reported degree of certainty about job choice between the two groups.

Table 3

Reported Degree of Certainty about Job Choice--Males

Degree of Certainty	Frequency	Accumulated Percentage
	Experimental Group Males	
Uncertain		
7	0	
6	1	100.0%
5	1	93.4%
4	2	86.7%
3	2	73.4%
2	4	60.1%
1	5	33.4%
Certain	15 Total	
	Control Group Males	
Uncertain		
7	1	100.0%
6	1	93.4%
5	1	86.7%
4	3	80.0%
3	1	60.0%
2	2	53.3%
1	6	40.0%
Certain	15 Total	
	N.S. (Fisher Test)	

Table 4

Reported Degree of Certainty about Job Choice--Females

Degree of Certainty	Frequency	Accumulated Percentage
	Experimental Group Females	
Uncertain		
7	0	
6	0	
5	0	
4	3	100.0%
3	3	87.1%
2	10	74.6%
1	8	33.3%
Certain	24 Total	
	Control Group Females	
Uncertain		
7	0	
6	1	100.0%
5	1	93.5%
4	1	86.8%
3	2	80.1%
2	6	66.7%
1	4	26.7%
Certain	15 Total	

Table 5

Reported Degree of Certainty about Job Choice--Total Group

Degree of Certainty	Frequency	Accumulated Percentage
	Experimental Group--Total	
Uncertain		
7		
6	1	100.0%
5	1	97.4%
4	5	94.8%
3	5	82.0%
2	14	69.2%
1	13	33.3%
Certain	39 Total	Mean = 2.23
	Control Group--Total	
Uncertain		
7	1	100.0%
6	2	96.7%
5	2	90.0%
4	4	83.3%
3	3	70.0%
2	8	60.0%
1	10	33.3%
	20 Total	Mean = 2.67

*Critical Value is $X^2 \leq 2.71$

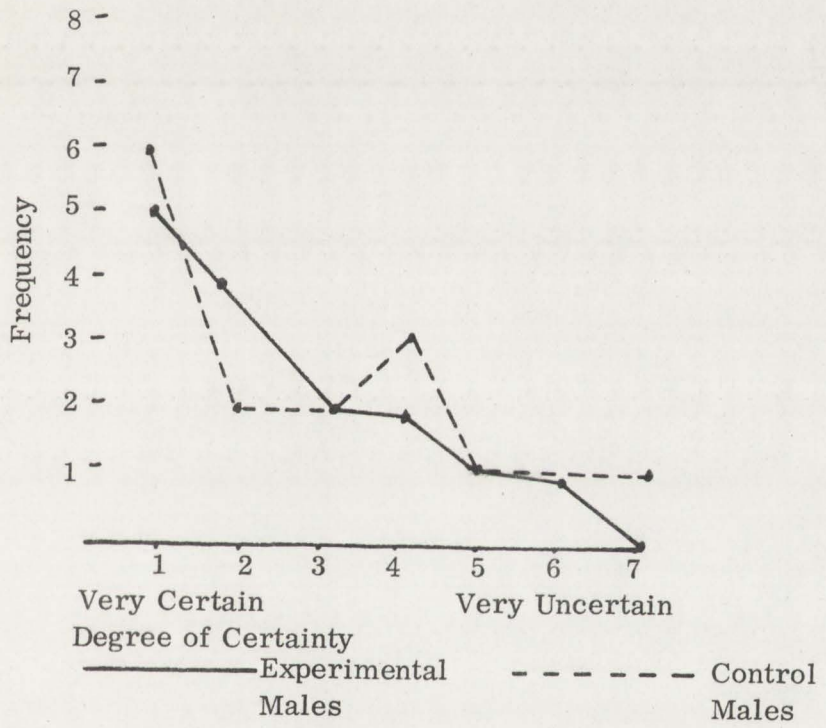

Figure 1. Graph comparing experimental group males and control group males on reported degree of certainty about job choice.

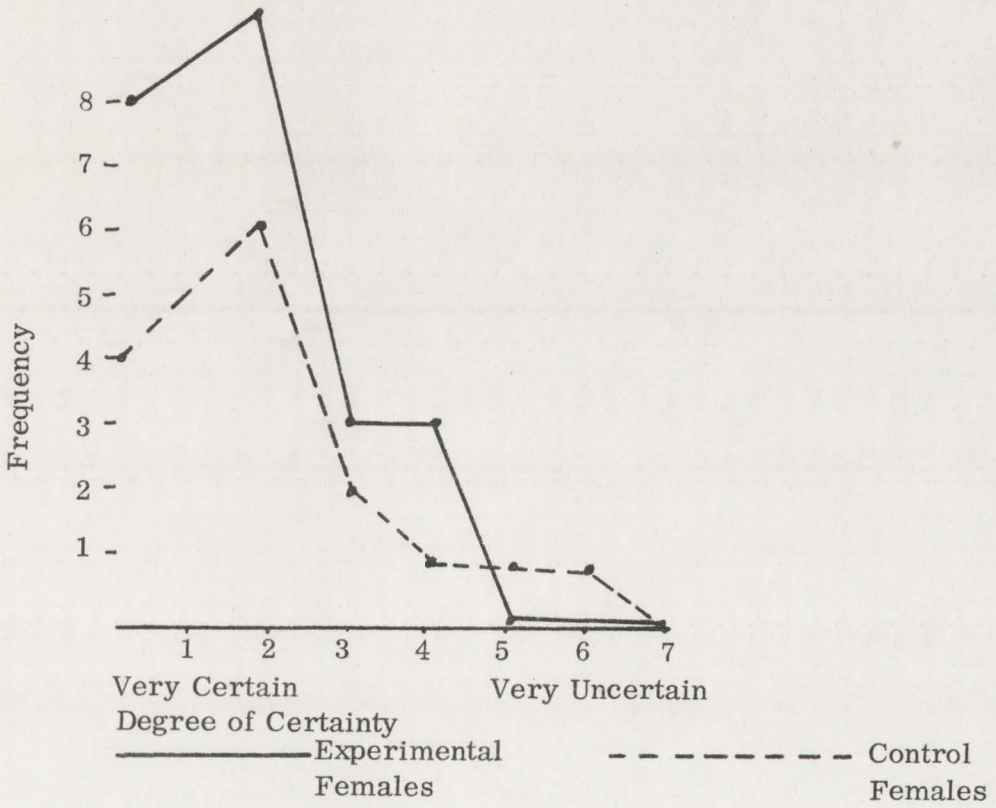

Figure 2. Graph comparing experimental group females and control group females on reported degree of certainty about job choice.

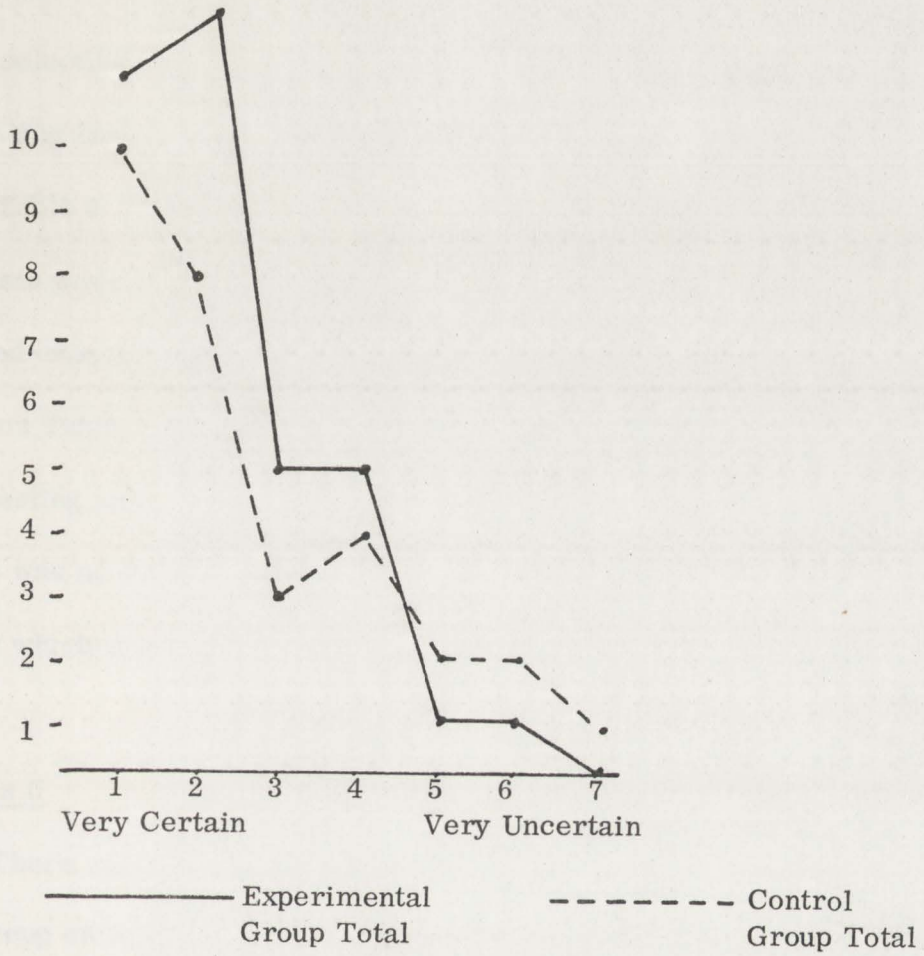

Figure 3. Graph comparing total experimental group and total control group on reported degree of certainty about job choice.

Hypothesis 4

There is no difference between the experimental group and the control group on selecting the categories mobile van, counselor, and personal interest as influencing factors in the job choice process.

Table 6 contains the data used to analyze Hypothesis number 4. Chi Square tests were run on the data for both control and experimental males and control and experimental females. The results of the Chi Square analysis are reported on Table 3. It can be seen that no significant difference was found with the testing and, therefore, we must retain the Null Hypothesis and conclude that there was no difference between the control and experimental groups in the frequency which they chose the categories mobile van, parents and personal interest.

Hypothesis 5

There will be no difference between the experimental group and the control group on making decisions about job choices at earlier ages (ninth and 10th grades).

On Table 7, it can be seen that both male and female control groups reported having made decisions about career choice at an earlier age than did either of the corresponding experimental groups. The total control group selected the ninth and 10th grade categories 11.9% more often than did the total experimental group. Hypothesis 5 must be accepted and it is, therefore, concluded that the experimental group did not report having made career choices

Table 6

Student Report of Who or What has Influenced Them the Most in Making Their Job Selection

	Experimental Male		Control Male		Experimental Female		Control Female	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
1. Personal Interest	5	33.3%	3	20.0%	9	36.0%	7	41.2%
2. Parents	5	33.3%	5	33.3%	5	20.0%	5	29.5%
3. Mobile Van	0		0		2	8.0%	0	
4. Counselor	0		0		1	4.0%	1	5.9%
5. Librarian	0		0		1	4.0%		
6. Family	0		0		2	8.0%	1	5.9%
7. Friends	0		0		0		2	11.8%
8. Other	5	33.3%	7	46.7%	5	20.0%	1	5.9%
Total Frequencies	15		15		25		17	
Total Percentage*		66.6%		53.3%		64.0%		70.7%
The Average of Numbers 1, 2, 3, selected								

*Total Percentage of numbers 1, 2, and 3 selected by the Experimental Group, Males and Females combined, is 65.3%. Combined control group average percentage is 62.0%.

X = .14* X = .045*

*Critical Value is $X^2 \geq 2.71$

Table 7

Student Report of When Career Choice was Decided Upon

	Experimental Male		Control Male		Experimental Female		Control Female	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Before ninth	2	13.3%	2	13.3%	4	16.0%	5	29.4%
Ninth Grade	2	13.3%	2	13.3%	1	4.0%	2	11.7%
10th Grade	1	6.7%	3	20.0%	2	8.0%	2	11.7%
11th Grade	5	33.3%	3	20.0%	6	24.0%	4	23.5%
12th Grade	4	26.7%	2	13.3%	10	40.0%	4	23.5%
Undecided	1	6.7%	3	20.0%	2	8.0%	0	
Total Frequencies	15		15		25		17	
Total Percentages of ninth & 10th Grade Selections*		20.0%		33.3%		12.0%		23.4%

*The average total percentage of ninth and 10th grade selections made by the experimental group, males and females combined, 16.0% combined control group average percentage is 27.9%.

at an earlier age than the control group. In fact the control group reported a higher percentage of early job selections than did the experimental group.

Hypothesis 6

There will be no difference between the experimental group and the control group on the number of correct associations of job choice with appropriate post high school training.

Table 8 reports the data collected for analysis of Hypothesis number 6. However, analysis with the Fisher Test indicates that there is no significant difference between either experimental and control group males or experimental and control group females. When the total experimental group is compared to the total control group, using the Chi Square Test, it can be seen that the difference between the two groups is negligible. The Null Hypothesis cannot be rejected and it must be concluded that there is no difference between the control and experimental groups in their ability to identify an adequate type of training or education to prepare them for their job choices.

Hypothesis 7

There will be no difference between the experimental group and the control group on the number of correct associations of job choice with specific institutions at which adequate training can be acquired.

Results of the research completed in analyzing Hypothesis number 7 (Table 9) indicate that the Null Hypothesis cannot be rejected. "A Chi Square Test of Independence of Categorical Variables" was conducted on the results of the total experimental group and the total control group. However, the

Table 8

Identification of an Adequate Type of Training or Education to Prepare for Job Choice--Correct or Incorrect Choices

	Frequency	Correct (%)	Incorrect (%)	Computed X^2 & Fisher Test Results
Experimental Group Males	15	11 (73.3%)	4 (26.7%)	N.S. (Fisher Test)
Control Group Males	15	13 (86.7%)	2 (13.3%)	
Experimental Group Females	25	24 (96.0%)	1 (4.0%)	N.S. (Fisher Test)
Control Group Females	17	16 (94.1%)	1 (5.9%)	
Experimental Group Total	40	35 (87.5%)	5 (12.5%)	.002 N.S.
Control Group Total	32	29 (90.6%)	3 (9.4%)	

*Critical Value is $X^2 \geq 2.71$

Table 9

Agreement of Post High School Training or Education Required for Job Choice and Identification of an Adequate Institution to Acquire such Training--Correct or Incorrect Choices

	Frequency	Correct (%)	Incorrect (%)	Computed X^2 & Fisher Test Results
Experimental Group Males	14	11 (78.6%)	3 (21.4%)	N.S. (Fisher Test)
Control Group Males	15	12 (80.0%)	3 (20.0%)	
Experimental Group Females	25	25 (100.0%)	0 (0.0%)	
Control Group Females	17	13 (76.5%)	4 (23.5%)	
Experimental Group Total	39	36 (92.3%)	3 (7.7%)	1.83 N.S.*
Control Group Total	32	25 (78.0%)	7 (21.9%)	

*Critical Value is $X^2 \geq 2.71$

computed Chi Square was 1.83 which does not approach 2.71, the Chi Square necessary for significance with 1 degree of freedom and Alpha set at the .05 level. Checking the computed tables of significance for the Fisher Test indicates no significant difference between experimental and control group male scores. Computation of female experimental and control group scores was not possible because of large numbers involved. However, comparison with total group scores indicates that no significant difference will be found.

Thus, it must be concluded that this data indicates no difference between the experimental group and the control group in agreement of post high school training or education required for the job choice and identification of an adequate institution to acquire such training.

CHAPTER V

Summary, Conclusions and Recommendations

This section is devoted to summarizing and drawing implications and conclusions about the data reported in the last chapter. To facilitate reading, the conclusions will be divided into the categories represented by the hypotheses.

Summary Statements About the Hypotheses

Hypothesis 1. The data collected to analyze Hypothesis 1 indicated that the MACE Program had no enduring effect on student's ability to choose a career which matched their personal interests. One of the objectives of the MACE Program was to help students know and understand their personal interests so as to assist them in being able to make wise vocationally oriented decisions. Therefore, it must be concluded that over an extended period of time the MACE Program failed to have an enduring effect on a critical aspect of career decision-making, that of choosing a career appropriate to one's interests.

Hypothesis 2. Analysis of the data for Hypothesis number 2 indicates that the MACE Program did not have an enduring effect on increasing student ability to choose a career which matches his aptitudes and abilities. It should be noted that one of the objectives of the MACE Program was to help students in gaining an awareness of their personal aptitudes so as to assist them in being able to make wise career related decisions. With this in mind, it must be concluded that MACE failed to accomplish one of its major objectives when analyzed over an extended period of time.

Hypothesis 3. The data collected to analyze Hypothesis 3 indicates that after 3 years Project MACE was not instrumental in helping students become more certain about their job choice than students who were not involved in the program. MACE was designed to motivate ninth grade students to start thinking about careers in order that they would be able to make career decisions which would help them eventually select appropriate careers. It seems, therefore, that if the program would have had a lasting effect on student decision-making ability that they would be more certain of their career choices as high school seniors than would their peers who were not involved in MACE. As has been pointed out, however, this is not the case.

Hypothesis 4. The MACE Program was set up to not only assist students in learning to make appropriate career decisions but also to emphasize the importance of using the school counselor as a resource to career decision-making and also to stress the importance of considering personal interests in the career selection process. It would be expected, therefore, that if the MACE Program would have had an enduring effect, students would recognize the importance of these resources in helping them to choose their career. However, as is indicated by analysis of data regarding this hypothesis it is not the case.

Hypothesis 5. Although it was found that experimental group males and females did not select the ninth and 10th grade categories more often than the male and female control groups, two important points should be noted. Number 1, only 6.7% of the experimental males were undecided about their

job choice while 20% of the control males showed undecision. This may indicate a tendency towards the MACE Program having been instrumental in helping males to make job selection before graduation from high school; number 2, there also seemed to be a tendency for both experimental males and females to put off actual job selection until later ages than did corresponding control groups. This may indicate that MACE influenced students to put more time and thought into their job selections than did control group students.

Hypothesis 6. Twelfth grade students who have made mature career decisions should have investigated adequate post high school training programs available for preparing them for the job of their choice. The experimental group demonstrated no better capacity to choose an appropriate means of post high school training than did students in the control group.

Hypothesis 7. Again, as with Hypothesis number 6 it is assumed that 12th grade students who have made mature career decisions should have investigated specific institutions at which they can obtain adequate training for the career of their choice. Since the experimental group demonstrated no better capacity to choose appropriate post high school training institutions than did the control group it must be assumed that over an extended period of time MACE was not instrumental in assisting students in making some critical career decisions.

Conclusions

A review of the results already reported in this chapter indicates that of the seven null hypotheses tested none were rejected; thus, no difference was

found between the control and experimental groups. This seems to indicate that, at least for the criteria measured in this study, the MACE Program had no enduring effect on a student's ability to make appropriate occupational choices.

It may be argued that because of the limited size of the sample there was a chance that the control group was an exceptional group and, therefore, was able to perform as well as the experimental group even though they hadn't had the information from the MACE Program. Two factors refute this type of conclusion. Number 1, Table 11 (Appendix B) reports a comparison of control and experimental groups in both total grade point average and mean grade point average of classes which were considered to be prerequisite for the jobs chosen by the students. It can be noted that both types of grade point comparisons are very similar for the experimental and control group members. Thus, in evaluating scholastic performance, which is a very significant variable in this study, there is no difference between groups. The second factor that refutes the aforementioned conclusion is that both groups scored moderately low on the perceptual accuracy of their interests and aptitudes (see Chapter IV, Tables 1 and 3), two areas that the MACE Program put special emphasis on. If the control was an exceptional group which scored as high as an experimental group that had been influenced by the MACE Program, then both group scores should be moderately high. This is not the case.

Although differences between control and experimental groups do not seem to hinder the validity of the study, a number of limitations were discussed

in Chapter III which must be taken into consideration in evaluating and generalizing the results of this study. Probably the greatest limitation to the generalizability of the results of this study is due to the type and size of the sample. Consideration should be made for the fact that the sample was small and confined to only one of the 14 schools involved in the MACE Program. Although the MACE Program itself was restricted to a rural population, it appears probable that urban students would have the same problem in deriving benefits 3 years after the program where no intervening program was taking place. The reader should also keep in mind that possibly the MACE Program effected students in a way that was not measured by the research methodology of this study.

Taking these limitations into account, it still appears that some difference between the experimental and control groups should have appeared in at least one of the hypotheses areas if Project MACE would have had an enduring effect on its students.

Two of the objectives of the MACE Program were: 1) to help the student know and understand his developmental status, i.e., personal interests, abilities and values' and 2) to help the student be able to plan to make vocational decisions wisely.

The hypotheses of this study were aimed at assessing whether these two objectives were accomplished over an extended period of time. The results indicate that the MACE Program did not accomplish the two objectives mentioned above after a period of 3 years.

Recommendations

In a study quoted earlier (Charlton, 1973) it was found that Project MACE had accomplished its objectives when evaluated immediately after the program. However, the results of this study suggest that the effect of the MACE Program was not enduring.

When one considers the variables being measured in evaluating the MACE Program (i.e., interests, abilities, aptitudes, and values) he must be aware of how subject to change these variables are over a period of time. Not only are these variables subject to change, but they are also subject to manipulation. In other words, if proper guidance and instruction is given, these variables can change in a direction that will be of advantage to the person being counseled and taught. However, because these variables seem to be part of a person's basic personality, it apparently behooves schools to engage in a career education program over an extended period of time. Ryan (1964) made this conclusion when she stated that it is questionable whether the self-concept is amenable to change when the time required for a career counseling program is only 9 weeks. If Ryan questions whether a 9-week program is long enough to effect a change in a person's personality, then certainly we should question whether a program lasting only a few days (the MACE Program included here) will be instrumental in inducing this type of change.

The short term effectiveness of Project MACE has already been substantiated. It is, therefore, recommended that the program be extended so that more time and emphasis is placed on accomplishing the objectives outlined.

It is also recommended that programs be designed and implemented to both preceed and follow up the MACE Program in different school years.

It seems evident that the development of an accurate and adequate "career self-concept" and accurate "occupational stereotype" is a process that takes place over an extended period of time under appropriate guidance and direction.

It is further recommended that:

1. Follow up studies be conducted to determine the correlation between the actual jobs chosen by the experimental group and such variables as their interests and aptitudes.
2. Subsequent studies measure a wider range of variables that could have been affected by MACE than did the present study.
3. Future studies use a larger number of both experimental and control group participants than did the present study. These participants should include students from a number of the 14 schools which were involved in the MACE Program.

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APPENDIXES

Appendix A: Questionnaire Used in This Study and a Report of Test-Retest Reliability Data found in Research on the Questionnaire

Presentation of Student Questionnaire

Questionnaire-explanation. The questionnaire was developed to assess factors thought to be important in job selection.

Question I-a and b required the student to write down his future occupational goal. A first and second choice were asked for so that in the event that the first choice could not be analyzed adequately then the second choice could be used.

Question I-c required the student to mark whether or not his present interests and aptitudes agreed with his job choice. The SVIB and grades in different classes were used to determine if the student was aware of his interests and aptitudes and if these agreed with his job choice.

Question I-d asked the person filling in the questionnaire to indicate how certain he was about his job choice. This question was presented to gather data that might indicate that the MACE Program had been effective in helping the student's career choice become crystallized and concrete.

Question I-e asked the student to indicate the type of post high school training that he would need to prepare for his job choice. This question was included in the questionnaire to determine if MACE students career choice had become crystallized to the point that they had formalized plans of preparation for their occupational choice. Question II went one step further in this

assessment by requesting students to name a specific institution where they planned on getting the training necessary for entry into the job they had chosen.

Question III attempted to measure if the MACE Program was a contributing factor in assisting students in making their job choice. Three categories--Parents, Mobile Vocational Unit, and Personal Preference--were considered to be areas most effected by the MACE Program. MACE not only attempted to arouse student interest in selecting an appropriate vocation, but the program was also designed to motivate parents towards helping their children with job selection.

Question IV was originally included to determine if the MACE Program had assisted students in realizing what their interests were. However, because of excessive overlap with the process involved in Question I-c, Question IV was deleted from the research.

Question V was included in the questionnaire to determine if the MACE Program was effective in helping students select and, therefore, be able to prepare for an occupation at an earlier age than control group students. Grades 9 and 10 were selected as the criterion grades for determining if MACE had influenced early job choice.

Questionnaire--Reliability data. Reliability data was collected on 29 seniors in high school, 12 of which were from Bonneville High School in Ogden, and 17 of which were from Logan High School in Logan. Test-retest methodology was used with 8 days elapsing between tests.

The results indicate a high degree of consistency in answering questions I-a and b, I-c, I-d, I-e, and II, with a moderately high degree of consistency for questions III and IV.

After consultation with several authorities, the writer was not able to find a statistic suitable for analyzing the reliability data for the questionnaire (except for question I-d where a correlation coefficient was used. However, if one takes into consideration the instability of the variables being measured, one is forced to conclude that the low degree of change in test-retest answers, warrants accepting the questionnaire to be a reliable instrument.

Table 10

Results of Test-Retest Reliability Analysis Conducted on Research Questionnaire

Question Number	Percent of the 29 Persons Tested Answering the Question the Same on Both Tests
I--a and b	89.7%
I--c	86.2%
I--d	.87 (Product-moment correlation)
I--e	93%
II	89.7%
III	76%
V	72%

QUESTIONNAIRE

Instructions: Name:_____

This questionnaire is part of a research program which is being carried out to determine the effectiveness of a career exploration program that was conducted in your school district several years ago. Your assistance in taking part in this research is greatly appreciated. Please give careful consideration to each question and answer each question as it pertains to you.

I. What is your future occupational (job) goal?

a. First Choice:_____

b. Second Choice:_____

c. Does job choice number one match your present abilities and interests? (Check the appropriate blank)

1. Abilities Yes _____, No _____, Uncertain _____.

2. Interests Yes _____, No _____, Uncertain _____.

Does job choice number two match your present abilities and interests?

1. Abilities Yes _____, No _____, Uncertain _____.

2. Interests Yes _____, No _____, Uncertain _____.

d. Check a number along this scale that indicates how certain you are about your 1st job choice. (Note: Many students are inclined to mark only the middle of the scale, feel free to check numbers at either extreme which indicate your degree of certainty or uncertainty).

Very Certain	1	2	3	4	5	6	7	Very Uncertain

e. Check the box which indicates the type of educational training that will be necessary for preparation for your first and second job choices.

	High School	College	Trade or Voc. School	Other
First Choice				
Second Choice				

II. If your choices require training or education beyond high school, please indicate at which institution you plan on getting this advanced training. (i.e., the name of a college, vocational school, technical school etc., that you are planning to attend).

a. First Choice: _____

b. Second Choice: _____

III. Who or what has influenced you the most in your deciding on: (Check one or more)

Job Choice Number One	Job Choice Number Two
a. Parents _____	a. Parents _____
b. Counselor _____	b. Counselor _____
c. Mobile Vocational Guidance Unit _____	c. Mobile Vocational Guidance Unit _____
d. Religious Leaders _____	d. Religious Leaders _____
e. Other _____	e. Other _____

IV. To what extent do you feel you know what your interests are?

Very Certain	1	2	3	4	5	6	7	Very Uncertain

V. When did you decide on your occupational career. (Check one)

a. Before the ninth grade _____.

b. Ninth grade _____.

c. 10th grade _____.

d. 11th grade _____.

e. 12th grade _____.

Appendix B: Table 11

Table 11

Comparison of Total Grade Point Average and Grade Point Average in Classes Considered Necessary as Pre-requisites for Job Chosen

	Frequency	Mean Overall Grade Point Average	Mean Grade Point Average of Classes Considered as Pre-requisites of Job Chosen
Experimental Group Males	14	2.80	2.47
Control Group Males	15	2.61	2.51
Experimental Group Females	25	3.0	3.12
Control Group Females	16	3.14	3.18
Experimental Group Total	39	2.92	2.87
Control Group Total	31	2.88	2.85

VITA

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Master of Arts

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